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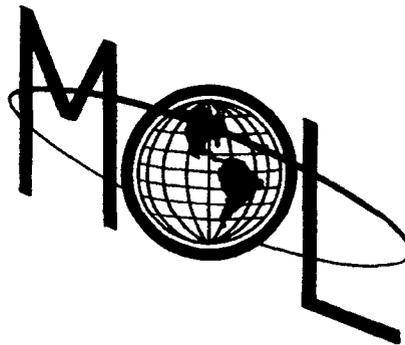
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**MANNED ORBITING
LABORATORY**

PROGRAM DIRECTIVE

MOL PLANETARY OBSERVATIONS

NO. 67-6



HEADQUARTERS UNITED STATES AIR FORCE

WASHINGTON, D.C.

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MOL PROGRAM OFFICE

DIRECTIVE NO. 67-6

MOL PLANETARY OBSERVATIONS

PROGRAM REQUIREMENT DOCUMENT

THIS DOCUMENT IS AN OFFICIAL RELEASE OF THE MOL
PROGRAM OFFICE AND ITS REQUIREMENTS ARE DIRECTIVE
ON ALL COGNIZANT ELEMENTS OF THE MOL PROGRAM

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APPROVED

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for

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I. PURPOSE

This directive provides authority and guidance for the implementation of activity associated with the conduct of planetary observations by the MOL Program on behalf of the National Aeronautics and Space Administration. Authority and guidance is also provided for the study of MOL capabilities as they might be adapted to the total spectrum of astronomical observations.

II. SCOPE

A. The provisions of this directive are applicable to all elements of the MOL Program in accordance with the terms of responsibility and authority provided the Director, MOL Program by the Secretary of the Air Force.

B. This directive is limited by the security requirements of the MOL Program, and by the DNRO guidelines concerning DOD involvement with NASA in programs using optical photographic systems.

C. The terms of this directive shall not be construed as authority to enter into new financial commitments with MOL Program contractors without Director, MOL approval, except for planning and study activity now included in the baseline MOL Program and described in the Manned Orbiting Laboratory Program Plan and Funding Requirements document, December 15, 1966 revision.

III. BASIC CONSIDERATIONS

A. The initial primary mission of the MOL Program is the development and early demonstration of an operationally useful high

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resolution optical reconnaissance system capable of achieving [REDACTED]
[REDACTED] ground resolution. The program approval includes, however,
provisions for the conduct of activity satisfying general scientific needs
on the basis of non-interference with primary mission objectives.

B. NASA has examined the MOL optical sensor system and its
capabilities, as related to astronomical research requirements, in the
following categories:

1. Use of existing MOL design and equipment configuration
without significant modification or addition to the basic instrumentation
or operation plan.

2. Minor changes to the MOL system, such as longer exposure
times, tighter stabilization tolerances, and the provision of an
alternate image station to accommodate specialized analytical detectors.

3. Major redesign of MOL instrumentation to provide optimum
capabilities for specialized astronomical observations.

4. Application of MOL technology (Components, subsystems,
procedures, etc.) to the development by NASA of astronomical research
instrumentation.

C. NASA has concluded that there is some rationale for securing
random planetary observations as the opportunity arises during the
course of the baseline MOL Program. NASA has described the scientific
interest in such observations, and has commended the acquisition of
such planetary photographs as may be obtainable on a non-interference
(with the primary MOL mission) basis.

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D. The conduct of astronomical observations by the MOL Program involves political and security ramifications of considerable sensitivity. Of primary concern is the protection of the security of the National Reconnaissance Program. At the same time the NASA image of peaceful space activities must be maintained. Activity by elements of the MOL Program must therefore be managed and conducted with extra precautions in accordance with these concerns.

IV. OBJECTIVES

A tertiary objective of the MOL Program is to conduct astronomical activity and missions that further the progress of science in this field for the benefit of the scientific community, and to secure economical savings for the total U. S. space program through effective use of available technology, programs and systems. More specific objectives are:

A. Secure planetary photographs for use by NASA and the scientific community.

B. Determine the feasibility and requirements for adapting MOL operations, systems and components to the conduct of astronomical observations of all kinds (planetary, stellar, solar).

C. Make maximum use in the MOL Program of NASA technology and effort associated with astronomical observation programs such as the Apollo Telescope Mount (ATM) program, particularly in areas of precision tracking, stabilization and thermal control.

D. Make available to NASA as much of the MOL-developed technology in optical/camera systems as is possible within the limits of security considerations.

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V. TASK SUMMARY

In accordance with this directive the MOL Systems Office will:

A. Prepare and submit to the Director, MOL for approval a plan of tasks and activity necessary to accomplish planetary observations on baseline MOL flights. Only manned automatic mode flights will be considered in this plan. The plan shall be forwarded to the Director, MOL by May 1, 1967. The plan shall address, at a minimum, the following considerations:

1. Technical/system requirements (hardware and software)
2. Crew training
3. Mission planning and operations
4. Schedules
5. Costs
6. Security and data handling

B. Initiate the analysis and study activity that is either included in the plan required in paragraph A. above or is necessary to prepare the plan; and which is possible in view of the limitation set forth in paragraph II. C. of this directive.

C. Conduct a study and submit to the Director, MOL by June 1, 1967 a report on the feasibility, requirements and time-phasing associated with the use of modified or redesigned MOL systems for astronomical observations in accordance with paragraphs III.B.2.

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VI. SECURITY

A. Existing provisions, requirements and procedures in the BYEMAN/DORIAN security system shall apply to all activity set forth in this directive.

B. Any requirements for new DORIAN clearances created by tasks directed herein shall be submitted to the MOL Program Office prior to processing through normal clearance channels.

VII. FUNDING AND SCHEDULES

A. Analytical and study activity related to Tasks V.A. and B. shall be conducted without request for additional funding.

B. Additional fund requirements determined to be necessary to accomplish Task V.C. shall be submitted to the Director, MOL for disposition.

C. Tasks directed herein shall be conducted in accordance with submittal dates specified in paragraph V.

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